

REMARKS

Reconsideration and withdrawal of the rejection and the allowance of all claims now pending in the above-identified patent application (*i.e.*, Claims 12-31) are respectfully requested in view of the foregoing amendments and the following remarks.

At the outset, it should be recalled that the present invention provides a surgical instrument for preparing implant beds in a person's lower jaw, along with a related method for producing the implant beds via a drilling element having a spinous shape and a handle affixed thereto. Because of the anatomy of the lower jaw of many patients, which might be particularly weakened due to atrophy or other ailments, prior art implementation methods often do not permit a stable anchoring of the necessary implant posts of sufficient length without the use of further measures.

To overcome the inherent limitations of prior art instruments and methods, the present invention, as now claimed, provides a surgical instrument and related method, which permits a very atraumatic invasive procedure, which readily allows for the quick and complete healing of the implementation point in otherwise healthy patients with a high rate of success.

More particularly, the invention, as now recited by Applicant's claims, provides a surgical instrument for preparing implant beds in a lower jaw of a patient, which includes a drilling element having a spinous shape and a truncated cone with an outer surface line that is smooth and encloses an angle of no more than several degrees with an axis of the

truncated cone. The surgical instrument further includes a handle at an angle to the axis of the truncated cone with the spinous shape of the drilling element enclosing an angle with the handle and with the drilling element and the handle being non-coaxially positioned relative to one another.

As explained in Applicant's *Specification* at Page 3, line 18 – Page 4, line 20, it is important that the spine encloses an angle with the handle and that the surgical instrument permits vertical access to the lower jaw of the patient for introducing the implant, even for the patient's back teeth. As such, the angled shape resulting from the drilling element and the handle being non-coaxially positioned relative to one another is essential. For preparing the implant bed, the proposed surgical instrument is introduced, in advance, with the top surface of the truncated cone being introduced first, into an opening in the patient's lower jaw produced as further described in Applicant's *Specification*. The surgical instrument used has a diameter of the top surface of the truncated cone which permits penetration through the enlarged borehole in the corticalis as far as the adjacent spongiosa.

With a further introduction of the surgical instrument, because of the conical design of the drilling element, the bore is enlarged; the adjacent bone tissue being forced radially outwards. The construction of the truncated cone, with a low conical angle and its smooth circumferential surface, permits manual introduction of the surgical instrument without a great application of force. It is important that the handle of the surgical instrument is arranged at an angle to the axis of the truncated cone. In this manner, during

work with the surgical instrument, an optimum position of the hand enclosing the handle and of the bore element is ensured relative to the opening in the lower jaw. Further, by successive changes of the direction of the surgical instrument (*i.e.*, its penetration section or axial inclination), an enlargement, and also an uplifting, of loosened segments is achieved.

As will be explained in greater detail hereinafter, nowhere in the prior art is a surgical instrument for preparing implant beds in a lower jaw of a patient, which includes a drilling element having a spinous shape and with the spinous shape enclosing an angle with the handle for permitting a substantially atraumatic invasive procedure, and with the handle being non-coaxially positioned relative to the drilling element, either disclosed or suggested.

By the present amendments, Applicant has amended independent Claims 12 and 23 (and Claims 13-22 and 24-26 via dependency) to recite that the drilling element and the handle of the presently claimed invention are positioned non-axially relative to one another which is submitted to clearly distinguish the present invention over the prior art of Daily, U.S. Patent No. 5,358,507. (As explained below, it is respectfully contended that the claims are also structurally – and patentably – distinguishable, as well, over the applied art of Carr, U.S. Patent No. 5,733,119.

Applicant and his attorney thank the Examiner for the allowance of Claims 27-31, which, of course, have not been further amended at this time.

Applicant has also filed a “Replacement Sheet” containing FIGS. 1a, 1b, 1c, 1d and 1e for the purpose of showing the “handle” of the claimed invention, as required by the Examiner in his drawing objection, issued pursuant to 37 C.F.R. §1.83(a), and to remove the dark shading that appeared in the originally-filed drawing figures, as recommended by the Examiner.

The text of the *Specification* was amended at Pages 9 and 10 to conform to the amendments to the drawing figures.

In light of the “Replacement Sheet” of drawing figures being filed with this *Amendment*, Applicant respectfully requests withdrawal of the Examiner’s 37 C.F.R. §1.83(a) drawing objection.

Accompanying the present *Amendment in Response to the Final Office Action*, Applicant is filing a *Request for Continued Examination* and formal *Petition for a Three-Month Extension* of time for Response, and remitting all required fees. Accordingly, the “finality” of the last Office Action should be withdrawn and the foregoing amendments presented herein entered, and considered on their merits, as a matter of right.

Turning now, in detail, to an analysis of the Examiner’s prior art rejections of Applicant’s claims, in the final Office Action the Examiner has initially rejected independent Claims 12 and 23 (and various dependent claims) as being anticipated, pursuant to 35 U.S.C. §102(b), by Daily, U.S. Patent No. 5,358,507, on the contention that Daily discloses a surgical instrument, or kit, comprising a plurality of drilling elements having a

truncated cone with an outer surface that is smooth and encloses an angle of no more than several degrees with the axis of the truncated cone, and a handle at an angle to the axis of the truncated cone that forms a comparatively sharp cutting edge with a circumferential surface of the cone. In addition to various other features cited by the Examiner, it is the Examiner's contention that Applicant's claims, as enumerated in the anticipation rejection applying Daily, read upon the disclosure of Daily, thereby rendering such claims as anticipated.

In reply to the Examiner's anticipation rejection applying Daily, the applied citation discloses a thromboendarterectomy suction dissector, which includes a handle (14) that is coaxial with a probe section, as shown FIG. 1 and discussed at Col. 1, lines 41-42, of Daily. The probe section is angled to a probe tip (40, 42, 44, 46, 48), as illustrated in FIG. 1, but not angled vis-à-vis the handle. At the distal end from the handle of the suction dissector tool taught by Daily is a spherical tip (20).

In sharp contrast to the which is being claimed by the instant Applicant, Daily fails to disclose a "drilling element having a spinous shape" and, to the extent that the "probe section" of the dissector tool taught Daily may be analogized to a "drill element," which Applicant submits would not be proper, the "probe section" of Daily is "coaxial" with the handle section, as opposed to be Applicant's invention, in which independent Claims 12 and 23 now recite that the drill element and the handle section are not coaxially positioned to one another.

Further, the spherical tip (20) of the dissector tool, it is respectfully submitted, cannot reasonably be viewed as an equivalent to Applicant's "drill element" and the spherical tip clearly lacks a "thorny" or spinous shape.

In light of the foregoing claimed structural distinctions between the present invention and that which is taught and suggested by Daily, coupled with the distinctly different medical procedures to which the dissector tool of Daily and the surgical instruments of the present invention are intended, it is respectfully contended that Daily neither anticipates, nor renders obvious, the present invention, as now claimed.

Separately, the Examiner has rejected Claims 12-15, 18, 20, 21 and 23-25 as being anticipated, pursuant to 35 U.S.C. §102(b), by Carr, U.S. Patent No. 5,733,119. The Examiner has taken the position that Carr discloses a kit of surgical instruments comprising a plurality of drilling elements having a first truncated cone with an outer surface that is smooth and encloses an angle of several degrees with an axis of the truncated cone and a handle (22) at an angle to the truncated cone, which anticipates the subject matter of the claims enumerated in the Examiner's anticipation rejection.

In reply to the Examiner's anticipation rejection applying Carr, the applied reference teaches a dental retro-fill drill tool, however, unlike the present invention, as now claimed, the drill tool in Carr fails to disclose or suggest a drilling element having a spinous shape, as recited in independent Claims 12 and 23.

Further, a careful review of the Examiner's stated anticipation rejection applying

Carr does not appear to indicate that the Examiner has applied Carr as disclosing a drilling element having a “spinous” shape, which may be thought of as either something covered with, or having spines, or which may be viewed as being “thorny,” such as certain plants.

Inasmuch as Carr is submitted to neither disclose nor suggest a drilling element having a spinous shape, as is recited in independent Claims 12 and 23, it is respectfully contended that Carr cannot reasonably be seen as either anticipating, or rendering obvious, the presently claimed invention. Consequently, withdrawal of the Examiner’s 35 U.S.C. §102(b) anticipation rejection applying Carr is respectfully requested.

In view of the foregoing, it is respectfully contended that all claims now pending in the above-identified patent application (*i.e.*, Claims 12-31) recite a novel and efficient surgical instrument for preparing implant beds in a lower jaw of a patient, which includes a drilling element having a spinous shape and with the spinous shape enclosing an angle with the handle for permitting a substantially atraumatic invasive procedure, wherein the handle and the drilling element are not coaxially positioned relative to one another, which is patentably distinguishable over the prior art. Accordingly, withdrawal of the outstand-

ing rejections and the allowance of all claims now pending are respectfully requested and earnestly solicited.

Respectfully submitted,

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Enc.: 1. Petition for Three-Month Extension of Time for Response;
2. *Request for Continued Examination*, pursuant to 37 C.F.R. §1.114;
3. EFT for \$960.00 (*Request for Continued Examination* + Three-Month Extension Fee).

The Commissioner for Patents is hereby authorized to charge the Deposit Account of Applicant's Attorney (*Account No. 19-0450*) for any fees or costs pertaining to the prosecution of the above-identified patent application, but which have not otherwise been provided for.